

Questions

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- Please fill out a survey and let us know how you would like to engage with us and learn more about BAE Systems and the Radford Army Ammunition Plant.

Resources

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Radford Army Ammunition Plant

Review of Modification request for Radford Army Ammunition Plant RCRA Subpart X Open Burn Area Permit

23 April, 2013



Agenda

- Introduction
- BAE Systems Overview
- BAE Systems Environmental Stewardship Overview
- Waste Management Overview
 - Open Burning Ground (OBG)
- Specifics of the changes to the OBG Permit
- Questions

Introductions

BAE Systems

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Chief, Operations Team, US Army,
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BAE Systems, Inc.

Led by Linda Hudson, President and CEO, BAE Systems, Inc. delivers a full range of products and services for air, land and naval forces, as well as advanced electronics, security, information technology solutions and support services.

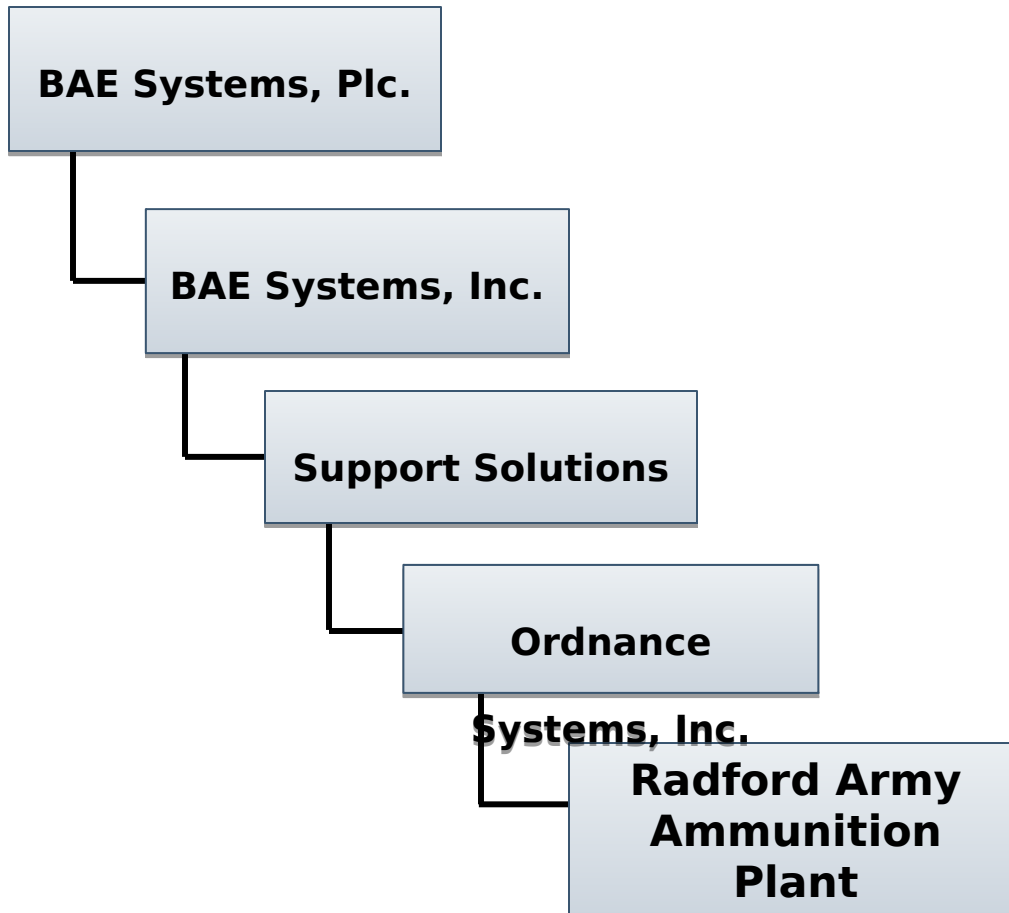
BAE Systems, Inc. is a top-ten prime contractor to the U.S. Department of Defense and is well positioned to support customers in what is the world's largest single defense market.

Key Facts:

- Employs 40,100 (34,000 in the U.S.) with major operations in 38 states, the UK, Sweden, Israel, and South Africa
- Recorded 2012 sales of \$12.75bn
- The U.S.-based business operates under a Special Security Agreement
- Holds more than 2,100 U.S. and foreign patents across technology domains
- Comprises four U.S.-headquartered business sectors:
 - Electronic Systems
 - Intelligence & Security
 - Land & Armaments
 - Support Solutions



Ordnance Systems Inc.



Employs over 750 people in Radford, VA and the surrounding communities

Site General Overview -- Mission

25 Year Facility Use

- Facility O&M
- Utilities
- SHE Compliance
- Physical

Propellant Supply

- DoD Directed
- Agile Mfg
- ~75 Products

Site Commercial Development

- ARMS Program
- 11 Tenants

Research & Development


- New Propellants
- IM Formulations

Modernization

- Infrastructure
- Single-point Failures
- New Technology



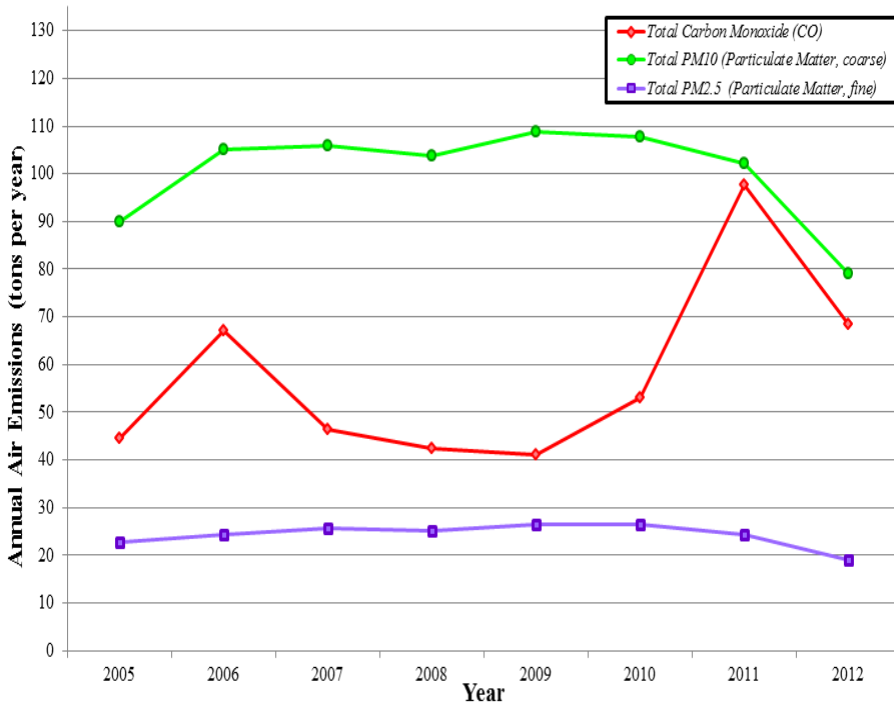
BAE Systems Environmental Stewardship

An aerial photograph of the Radford facility, a large industrial complex with several large buildings and a tall smokestack, situated in a valley. The facility is surrounded by dense green forests. In the foreground, a river flows through the valley, and a bridge is visible. The background shows more of the valley and some distant buildings.

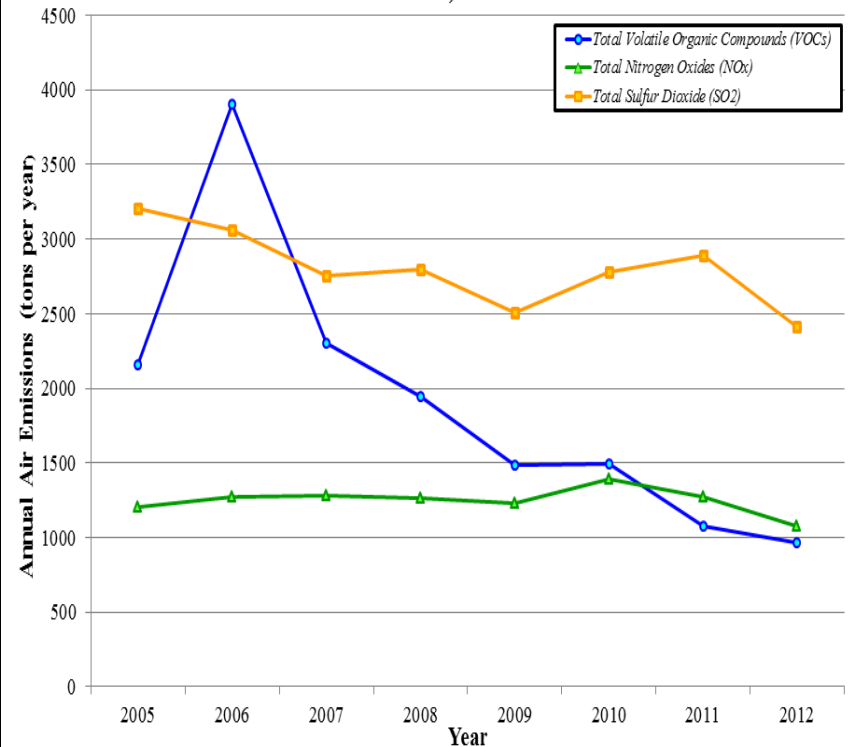
In partnership with the US Army and the United Steel Workers Union, BAE Systems and all of its employees will operate the Radford facility in a manner that strives to meet the needs of our current generation of Warfighter without compromising the resources of future generations in the New River Valley. The employees of Team Radford will comply with all applicable legal requirements to promote environmental protection and enhancement and exceed those requirements when possible.

Robust Air Tracking and Reporting

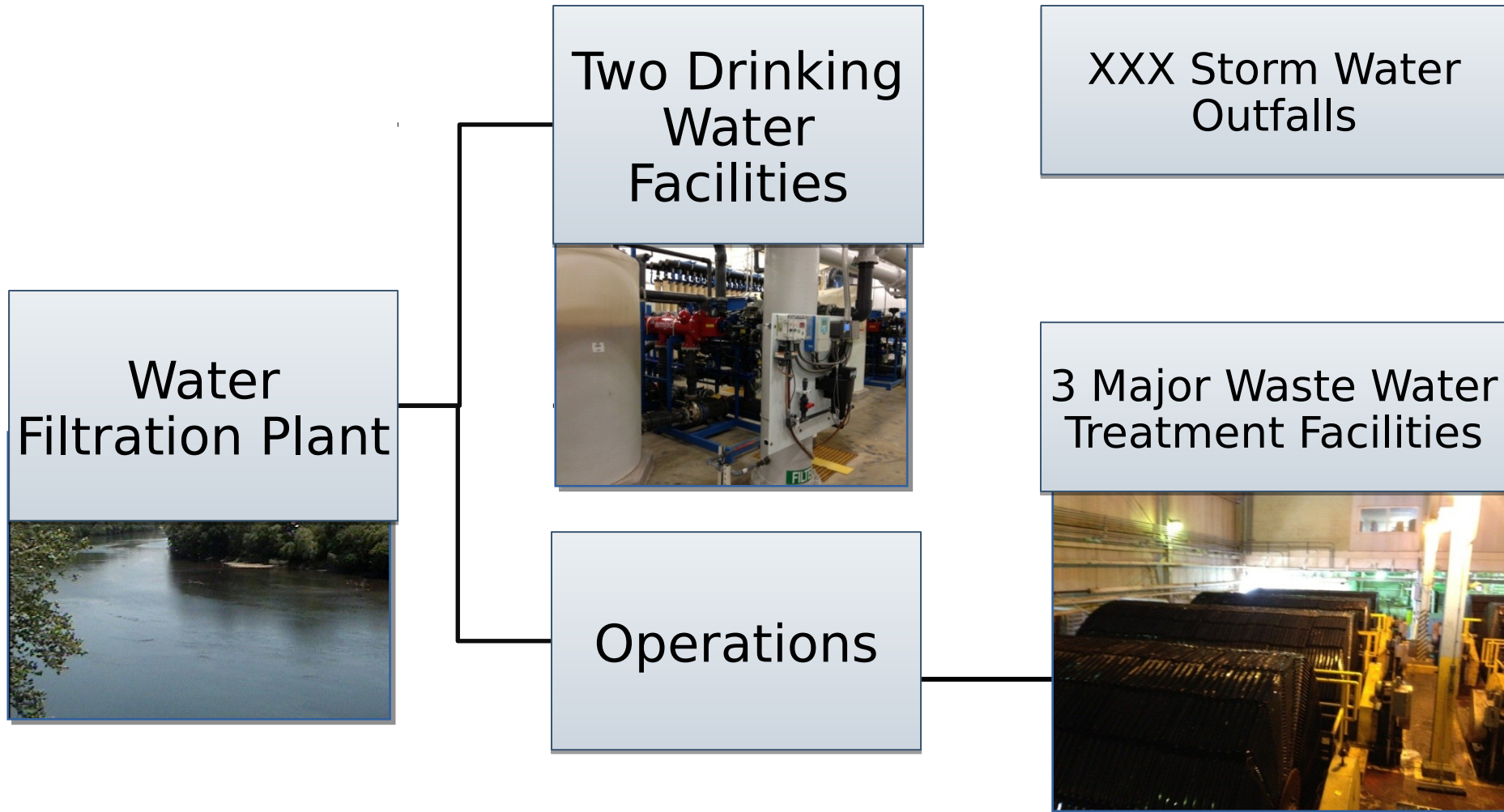
Annual Air Emissions for CO and Particulate Matter from 2005-2012



Annual Air Emissions for VOCs, NOx and SO2 from 2005-2012



Water Management



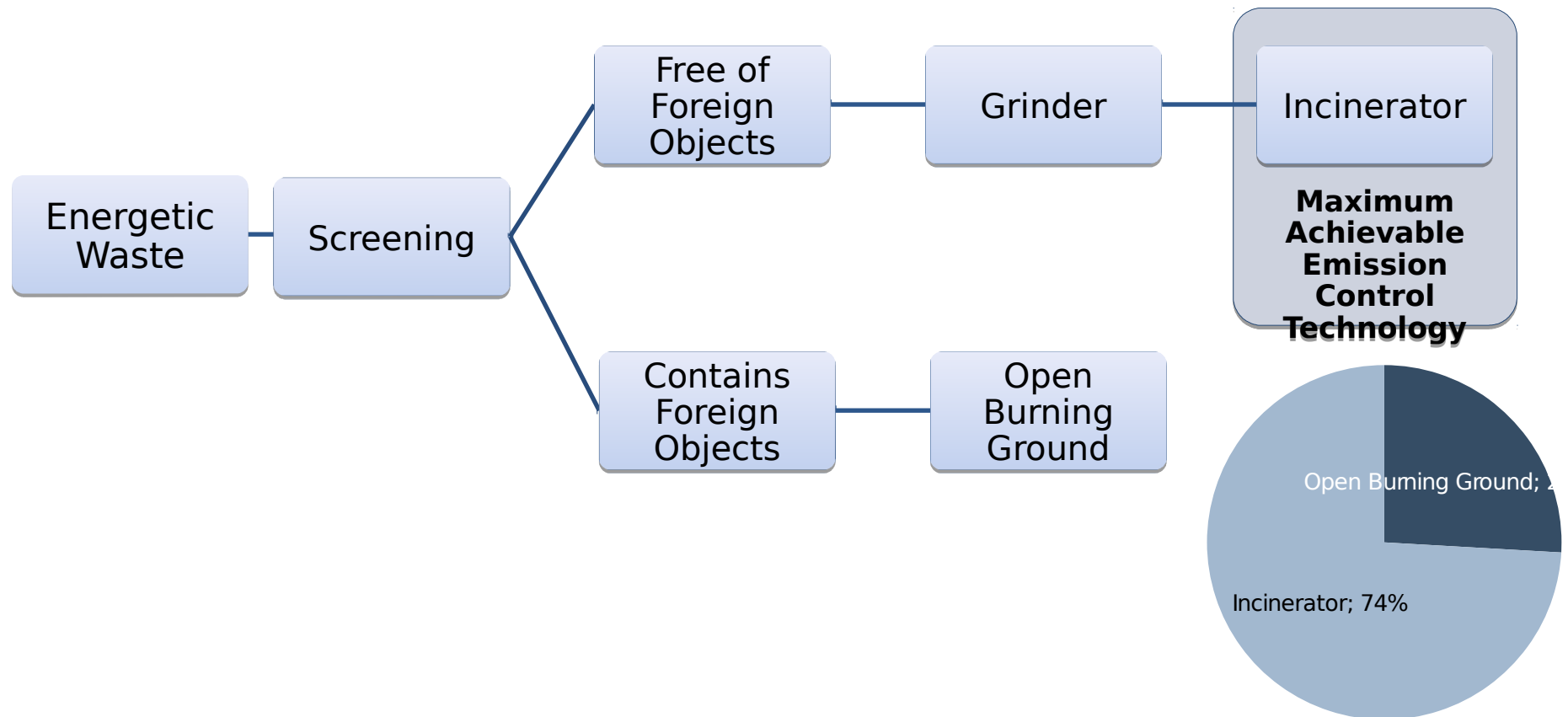
Waste Management

BAE's defined policy for dealing with nitrocellulose and other energetic wastes is:

1. **REDUCE** Waste generation at the various sources
2. **RECYCLE** propellant where safe and allowed by military specifications.
3. **Proper DISPOSAL** in accordance with all Virginia Department of Environmental Quality (DEQ) and Federal Environmental Protection Agency (EPA) regulations and requirements.



Energetic Waste Disposal Process



Open burning is the safest disposal route of last resort

Modification Request Sent to the DEQ

Item

1. Modification of Module IV

- **Detection Monitoring**

2. Modification of Attachment IV.A

- **Groundwater Monitoring Program Sampling and Analysis Plan**

3. Modification of Module V

- **Groundwater Compliance Monitoring Program**

4. Modification of Module VII

- **Corrective Action and Groundwater Monitoring Program**

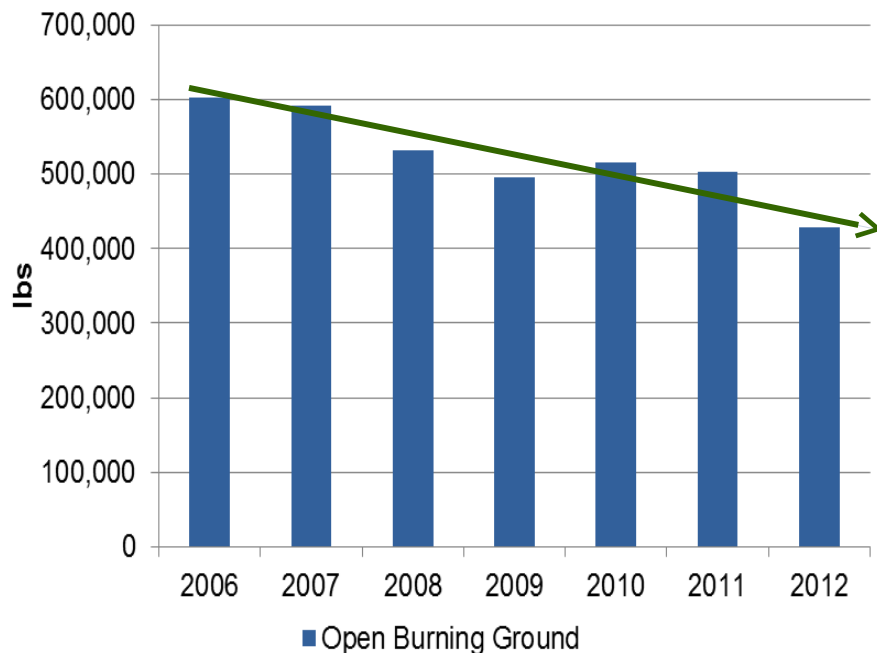
5. Modification of Module III

- **Operating Conditions**

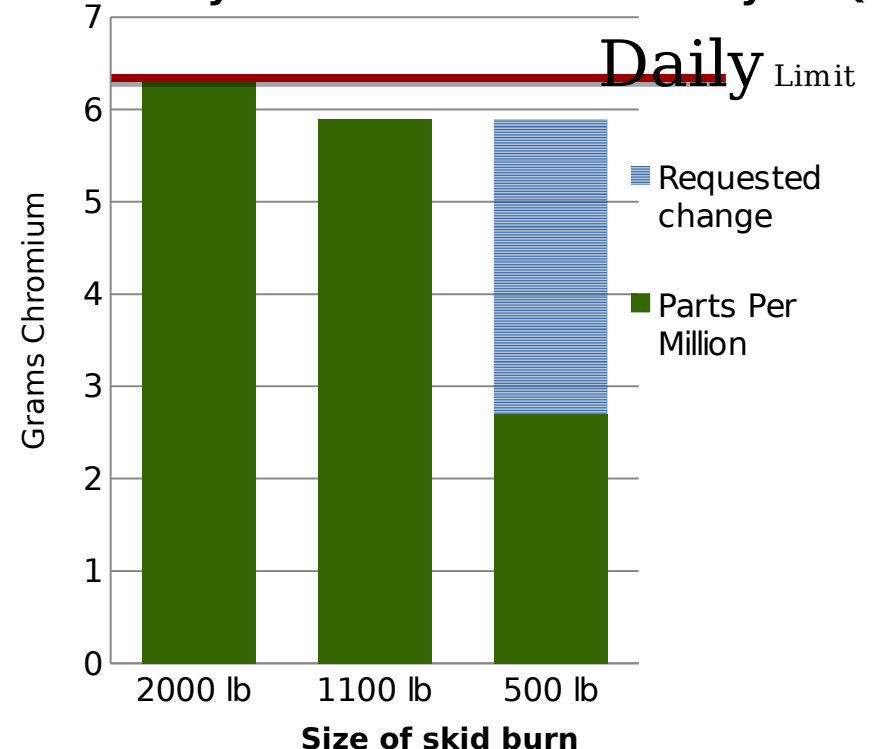
Why did BAE Systems ask for a change in small burn chromium concentrations?

- Due to a decrease in total energetic wastes going to the open burn area, BAE Requested a change in the Chromium concentration for small (500 pound) burns in order to increase operational flexibility, NOT an increase in total Chromium emissions.

Total Energetic Wastes going to OBG



Daily Chromium Limits set by DEQ



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